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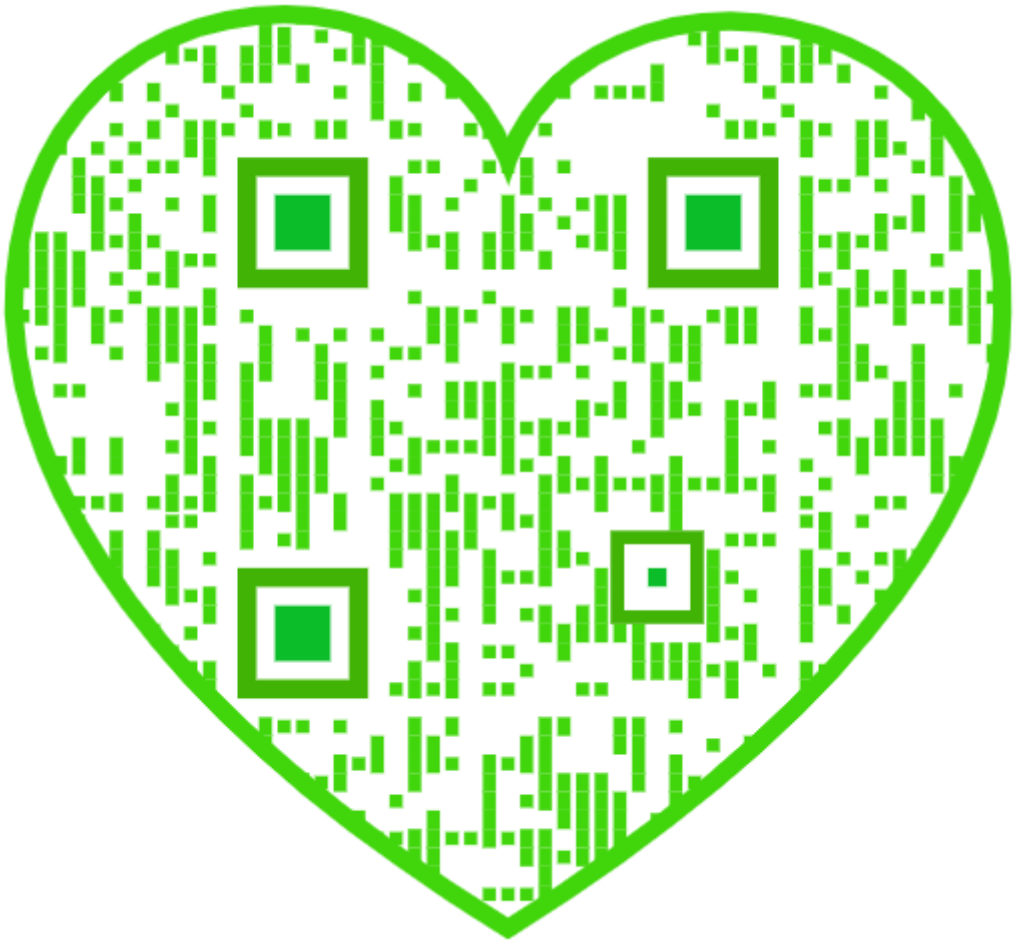
How to Successfully Operate A Steam Laundry

By

C. D. Patterson



How to Successfully Operate A Steam Laundry

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C. D. Patterson

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To my brother laundrymen, this booklet is dedicated.

Sincerely,

C. D. PATTERSON,

Common Sense Laundryman.

My Brother Laundrymen :

In presenting this, my first, edition of Formulas, Rules, Etc., to my friends, patrons and the trade, I desire to state that I have endeavored to fully explain a System for Successfully Operating Steam Laundries in different localities and under different conditions, and one which I deem will fill a long felt want.

This booklet contains valuable information for the beginners as well as for the older laundrymen who have not had the opportunity of gaining the experiences and methods of other workmen; and also for the owner of the small plant who is not doing business enough to justify keeping a high priced foreman; for the washerman who washes to qualify himself for the position of foreman; for the foreman who has had but a limited experience and wants to better himself. In fact, this treatise will help anyone who is interested in the art of fine laundry work.

I take this opportunity to thank my customers and friends for the interest they have taken in my work, which enables me to present this to the trade.

C. D. PATTERSON.

Sheldon, Iowa, February 1, 1904.

THE OFFICE.

This department should always be kept neat and clean, and provided with suitable racks to lay bundles upon and have a good convenient place for customers to list a bundle, and no matter how the one in attendance feels, they should always have a pleasant word for every one coming into the office, kindly answering all questions asked, inviting them to call again. This does not cost anything but makes money for you. The better appearance you put on in your office, the better. No unlaundered bundles should be allowed to lay in the office. Take them to the marking room as soon as they have been received. For a set of laundry books, I would recommend Dowst's System as it is about the only perfect system for laundry bookkeeping. They make a specialty of those books and if their system is used an experienced bookkeeper will not be necessary. Anyone with a common school education can keep these books accurately, being especially adapted to this business.

A nice easy chair or seat is a good thing to have in the office for the customer to rest while waiting a few minutes in case the bundle is not quite ready. A daily paper would also be nice to hand the customer to read while waiting. These little things all help at this business and cost but little. Another thing—never promise a bundle at a certain time unless you are certain of getting it out at exactly that time. Ten minutes late is not on time, and may cause a customer to miss a train, or put him to some inconvenience that he may never forget, and he may not call upon you to do his work again. So any promises made by the office help, or the drivers on the wagons, must be carried out to a letter, no matter if it loses money for you. Make your word good, for the customer is not to blame for the mistakes of you or your help. You had better discharge help than disappoint a customer. In this way your help will soon learn not to make any promises that cannot be fulfilled. The office help can always ascertain from the foreman if the work can be done at a certain time. The drivers should also keep in close touch with the working part of the plant. In this way they can all be governed, and know at what time the last wash will be started and when it is too late to promise time work. Everyone in the plant must work to the advantage of each other. When your plant is running on a basis of this kind your success is at hand and you will have no trouble in securing all the business that you can handle.

Mr.....

Question sheet No. 1, 2 and 3 has been personally gone over by me and I note that you are using.....from ..... This soap is a very good soap but I recommend that you try a barrel of....., put up and sold by....., as this soap is a very fine quality and makes a good rich suds and I believe it will be cheaper for you than the soap you are now using, as it is particularly adapted for.....water, also get a barrel of.....and use it for colored goods, as it is excellent and does not fade colors; you can also use it for flannels according to Formula No.....; make for white goods according to Formula No....., use the.....for white goods and report the result to me as soon as you have given those goods a fair trial, but, if you continue to use the soap you are now using, use it according to Formula No..... Do not fail to follow the formulas as they are especially adapted for that locality and grade of work you desire to turn out.

Question Sheet No. 1, 2 and 3 has been personally gone over by me. I note that you are using.....and this is a very good starch. I would recommend that you try a barrel of ....., also a barrel of..... ....., put up and sold by..... .....as I have been using supplies from their house and I have always found everything sold by them to be just as represented, hence, I do not hesitate to recommend them to my customers, and, I recommend that you try the above brand starches and report your success. Cook according to Formula No....., but, if you continue to use the brands which you are now using, cook according to Formula No..... To starch family clothes, shirtwaists, skirts, lace curtains, etc., try Formula No. 27, as this formula has had great success by my customers in general and is very highly recommended and will do all I claim for it.

FORMULAS FOR PREPARING SOAPS.

Formula No. 1.—Use 25 lbs. of neutral chip soap, 10 lbs. Wyandotte Washing Soda to 50 gal. water; mix as Formula No. 3, only add Wyandotte Washing Soda instead a Caustic Soda. This will make a soap fit for any use and will work well on table linen as well as shirts, collars and cuffs. Always warm before using.

Formula No. 2.—Use 30 lbs. Neutral Chip Soap, 7 lbs. of borax to 50 gal. of water. Mix according to directions of Formula No. 1, only use borax instead of Wyandotte Soda. This is a good soft soap for colored goods or flannels. In cooking this soap be sure that soap is thoroughly dissolved before adding the borax. Always warm soap before using.

Formula No. 3.—Use 60 lbs. of Neutral Chip Soap, 5 lbs. of Green Banks, 98 per cent Caustic Soda, 60 gal. of water. Place the soap in a tank of 25 gal. of water and boil until the soap is thoroughly dissolved. Dissolve the Caustic Soda in a pail of cold water and add the caustic soda to the soap, stirring briskly, to thoroughly mix caustic and soap; add the balance 35 gal. of water, boil for a few minutes to thoroughly mix the soap and water. It is better to use hot water to fill up with after the caustic has been added. Always warm up soap before using as liquid soap is better to gauge suds with. Always weigh soap and measure water. To make larger or smaller quantities, use same proportion of material.

Formula No. 4.—Place in the tank 30 lbs. of Green Olives Chip Soap and 50 gal. of water. Cook until soap is thoroughly dissolved, then add 10 lbs. Wyandotte Soda.

FORMULA NO. FIVE.

For washing white shirts, collars and cuffs.

First.—Give luke warm rinse of ten minutes.

Second.—Warm suds of twenty minutes.

Third.—Hot suds (but do not boil) thirty minutes. Bleach in the last fifteen minutes of second suds. Use bleach made according to Formula No. 16.

Fourth.—A hot rinse of ten minutes.

Firth.—A hot rinse of five minutes.

Sixth.—A hot rinse of five minutes.

Seventh.—Sour, use oxolic acid as per rule. Keep sour good and hot, run fifteen minutes.

Eighth.—A hot rinse of five minutes.

Ninth.—A warm rinse of five minutes.

Tenth.—Blue in cold water, run until you get the desired shade, say, ten minutes. Always pour bluing in machine while cylinder is

running toward you. Use bluing made according to Formula No. 24. It is always best that you measure out the required amount to be used, put it in a pail of clean, clear water, cold, add just a litttle of this to machine at a time until the desired shade is obtained. After the desired shade is obtained, close machine and let it run a few minutes to make sure that they are thoroughly saturated and that the entire load is evenly shaded. In both the first and second suds use the required amount of Wyandotte washing soda powder, also put this in machine while cylinder is running toward you and before you put in your soap, as the Wyandotte has a great tendency to make suds. You will have to use much less soap than you would if you did not use Wyandotte. A little of the Wyandotte in the first warm rinse, before the suds, will help to take out the old starch and some of the stains. In letting in the water for the suds, always stop machine and look at the depth of the water. For suds never have over four inches of water in the inside of the cylinder. For rinse, sour, and bluing you may use a little more water, say, an extra inch in the machine. Bleaching in the suds is a great help as it saves time and produces more general satisfaction.

Never allow your suds to go down even if your time is almost up on the suds. If it goes down, build up as soon as possible. Bleach made according to Formula No. 16 has a tendency to make suds come up when it is put into the machine, but do not try to stop it. Close lid on machine and watch it so that the suds do not go down. Never boil your goods as boiling is a detriment. The old theory of boiling was a sad mistake and a hot-bed for black and soap specks. You know what they are. But, in case you are troubled with soap specks, use a little caustic soda in the suds in connection with Wyandotte Soda. But if this formula is followed you will have no black specks to contend with. It is true that this formula takes quite a little time but when you are through you have the results, alhough, I have prepared shorter formulas which you may try, but this is my favorite as it never fails in any climate with any ordinary kind of water, provided the water is clear and in proper condition with which to wash. The total time is one hour and fifty-five minutes.

FORMULA NO. SIX.

For washing white shirts, collars and cuffs.
First.—A warm or cold rinse of ten minutes.
Second.—A warm suds of thirty minutes.
Third.—A warm suds of thirty minutes.
Fourth.—A warm rinse of ten minutes.
Fifth.—A warm rinse of five minutes.
Sixth.—Bleach in warm or cold water.
Seventh.—A warm rinse of ten minutes.

Eighth.—A warm rinse of ten minutes.

Ninth.—A cold or luke warm rinse of five minutes.

Tenth.—Sour and blueing ten minutes. Use acetic acid for sour and use the acid according to size of load. Use blueing made according to Formula No. 24. Use Wyandotte Washing Soda according to size of load and hardness of water. Use bleach made according to Formula No. 18. In case you have no Wyandotte Washing Soda, use soda-ash instead. Use soap made according to Formula No. 2 or 3, if water is extra hard, but if soft or medium hard, use soap made according to Formula No. 1 or 2.

This formula will produce a fine grade of work. Always be sure that you have rinsed out the soap thoroughly before introducing bleach as the bleach is extra hard and has a tendency to curdle the soap and is liable to produce black specks if soap is not thoroughly rinsed out. Be sure to have bleach thoroughly rinsed out before introducing blueing as the bleach will spoil Anlien Blueing, as you use acetic acid for the sour, and in blueing water much less blue will be required. Always run according to formulas and never do any guess work as to time or measure.

FORMULA NO. SEVEN.

For Washing Colored Shirts, Collars and Cuffs.

First.—A warm rinse of five minutes, use a little Wyandotte Washing Soda in this rinse.

Second.—A warm suds of thirty minutes.

Third.—A warm suds of thirty minutes.

Fourth.—A warm rinse of five minutes.

Fifth.—A warm rinse of ten minutes.

Sixth.—Blueing, cold, ten minutes. Use soap made according to Formula No. 2 or 4. Use Wyandotte Washing Soda according to size of load, but if water is extra hard use a little more of the Wyandotte Washing Soda and never get your colored clothes very hot, say, not more than 120 degrees Fahrenheit. This is a short but perfect method for washing colored goods. Always try and keep suds and rinse the same temperature.

FORMULA NO. EIGHT.

For Washing Colored Shirts, Collars and Cuffs.

First.—A cold rinse of ten minutes.

Second.—A warm suds of thirty minutes.

Third.—A warm rinse of five minutes.

Fourth.—A warm suds of thirty minutes.

Fifth.—A warm rinse of five minutes.

Sixth.—A warm rinse of five minutes.

Seventh.—Blueing, cold, ten minutes.

This is a very good formula for working shirts where they are very dirty, as the rinse between the suds has a tendency to carry off the dirt, giving the second suds a fresh start on the goods. Use Wyandotte according to size of load. Be careful not to get water hotter than 120 degrees Fahrenheit for colored work.

FORMULA NO. NINE.

For Washing Table Linen.

First.—A warm suds of fifteen minutes.

Second.—A warm suds of thirty minutes if linen is very badly soiled, but if not badly soiled run first suds twenty minutes instead of fifteen minutes, but if very badly soiled give second suds a run of thirty minutes. Make this second suds a little hotter than the first suds.

Third.—A hot rinse of ten minutes.

Fourth.—A warm rinse of five minutes.

Fifth.—Blue in luke warm water. Use Wyandotte Soda according to size of load, and never boil table linen. Use blueing made according to Formula No. 24.

FORMULA NO. TEN.

For Washing Woolen.

First.—Put in machine luke warm water, start machine to run then add a little Wyandotte Washing Soda according to amount of water and size of load to be washed. Use soap according to Formula No. 2 or 4 and heat up to about 100 degrees Fahrenheit, or just good and warm so that you can bare hand on cylinder. When you have a good rich suds stop machine and put flannels right in suds, run fifteen minutes. Watch this closely and keep water at same temperature all the while, then take flannels right out of the suds by stripping them through the hand, but do not wring them by hand. Place them in an extractor and run for five minutes, take them out, shake them up in proper shape and hang them right in a hot dry room, do not allow them to lay around and get cold. Leave them in dry room until they are good and dry. They will be as soft and fluffy as when they came from the factory, providing they have never been poorly washed, but if they have been poorly washed and once shrunken it is a hard matter to again get them in a nice soft condition, but this formula will help to put them in a proper state.

This is my favorite formula for flannels as it never fails to do the very finest grade of work. This formula will also wash all wool blankets in the most satisfactory way. Do not be afraid that the soap left in the flannels will harm them, as this soap will evaporate with the moisture and leave flannels in a very fine state and fit for a king to wear.

FORMULA NO. ELEVEN.

For Washing Flannels.

First.—Prepare a suds as Formula No. 10, only use borax instead of Wyandotte Soda. Use soap made according to Formula No. 2, run in suds fifteen minutes and while the suds is being run prepare in another machine a rinse of the same temperature as suds. Use a little borax in this rinse, but in case another machine is not handy or ready for use, use a tub in which to prepare a rinse. Always douse flannels up and down to rinse them but do not twist them any more than can be helped. Strip them through the hand out of the rinses, place them in extractor and run for five minutes. Put them right in a good hot dry room, leave until dry. Some prefer this in preference to Formula No. 10, but either will wash very satisfactorily and give good results if formulas are followed.

While I do not get a cent for recommending Wyandotte Washing Soda, I get the results and this is what my customers are after, and in my fifteen years' experimenting with every new thing that was placed upon the market to benefit the laundryman in different localities I have found nothing that would come up to Wyandotte Washing Soda, as it can be used in so many useful ways and produces the very finest work of anything I have yet found, but as soon as I find anything better, that will produce as many good points as Wyandotte Washing Soda then I will accept and recommend it instead of Wyandotte.

Wyandotte Washing Soda is manufactured at Wyandotte, Michigan, by J. B. Ford & Co., and sold by all leading supply houses in the world, and you will be benefited by its use in your laundry. Please understand that this is no advertisement, but, as a doctor, it is one of my favorite prescriptions, and when used according to my directions it will cure the washerman, also the proprietor, of the following diseases:

Such as yellow seams, yellow streaks, yellow blotches, yellow wrist bands, yellow neck bands, dirty neck bands and dirty wrist bands; faded shirts, shrunken flannel, that off day which you have every week, loss of time, kicks from your customers, that big soap bill every thirty days, those go-backs, come-backs, and draw-backs, the blues and many other diseases which the laundryman is apt to have when he is on the sick list.

FORMULA NO. TWELVE.

For Washing Flannels.

In washing flannels, first let the water in wheel and heat to 75 or 80 degrees, put in soap and start wheel and let run until soap is thoroughly dissolved; stop wheel, put in flannels, run 15 minutes, stop

wheel and run off; run on water same temperature as first, run wheel 5 minutes, stop wheel, run off; run on second rinse, start wheel, run 5 minutes, stop wheel, run off; take out flannels put in extractor and when extractor gets up to full speed, run one minute, then put in dry room of normal temperature.

FORMULA NO. THIRTEEN.

Hotel Linen, Flat Work, Barber Towels, Etc.

When you get the same goods to wash regularly, wash occasionally with Wyandotte Washing Soda alone, using no soap with it.

Some laundrymen who do this class of work every day, wash once each week with Wyandotte Washing Soda alone, getting splendid results. It keeps the linen in splendid condition and prevents yellow seams.

It also saves much soap.

If you do this class of work Mondays would be an excellent time to give the goods this sort of treatment.

Remember that Wyandotte Washing Soda is absolutely harmless.

First Cold Rinse.

If Wyandotte Washing Soda is used in the first cold rinse (before the suds) it opens the fibre of the goods, giving the goods a lace curtain effect, allowing the soap and water to pass through and act much more readily upon the fabric.

This action cleanses the goods much more thoroughly and requires less soap to produce the best results.

This plan works equally well with white and colored goods.

From one to two pounds should be used according to the size of the load and hardness of the water, and should be allowed to run not less than 10 minutes.

It can be put into the washer in dry form or in solution.

Wyandotte Washing Soda should not be dissolved in boiling water.

In making a solution use lukewarm water.

FORMULA NO. FOURTEEN.

Washing Formula for Colored Goods.

First Suds.

Run cold water in wheel to show four inches in inside cylinder, put in 1 to 2 pounds of Wyandotte Washing Soda, either dry or dissolved, run 10 minutes, run off, drain well.

Second Suds.

Run in lukewarm water 3 inches in inside cylinder, add soap in same manner as first suds, turn on steam, bring same up gradually to 100 degrees Fahrenheit, run 25 minutes, run off, drain well.

First Rinse.

Run in lukewarm water to 10 inches in inside cylinder, run 5 minutes, run off, drain well.

Second Rinse.

Run in lukewarm water 8 to 10 inches, run 5 minutes, run off, drain well.

Third Rinse or Blue.

Run on water in usual way, and blue.

Wyandotte Washing Soda being more neutral than soap, will not injure or run the colors.

FORMULA NO. FIFTEEN.

To Wash White Goods.

For high grade shirt, collar and cuff work, add 1 pound of Wyandotte Washing Soda to each 100 shirts or their equivalent in collars and cuffs. Run these in cold or lukewarm water for about 10 minutes. Run this off.

Then start the first suds, using Wyandotte as a soap builder as directed on page 13 of this book.

Bleach during the last 10 or 15 minutes of the second suds with the Wyandotte Bleach. (See page 12). This will increase the suds without adding more soap as you do with other bleaches. As the water is not alike in any two places and it is necessary for each laundryman to follow rules that fit his particular case. These rules for the use of Wyandotte, however, will apply to almost any conditions.

FORMULA NO. SIXTEEN.

To Make Bleach.

If water is soft use 10 pounds of chloride of lime and 10 pounds of Wyandotte Washing Soda for each 20 gallons of water.

If water is medium hard, use 10 pounds of lime and 16 pounds of Wyandotte, but if water is very hard use 10 pounds of chlorid of lime and 20 pounds of Wyandotte.

Dissolve lime and soda in different vessels, using COLD water.

Dissolve them thoroughly and then pour together, adding enough water to make 20 gallons. Stir occasionally and then let stand over night.

This gives a soft pink bleach, which can be used in second suds without lowering the suds.

Wyandotte overcomes the ill effect of chloride of lime. It precipitates the lime and softens the bleach, also holds the chlorine gas, which is the real bleaching agent.

Keep bleach jar covered. If bleach is strained through a cloth into a carboy it will keep four weeks if well corked.

FORMULA NO. SEVENTEEN.

To Build Soap.

Instead of using 60 pounds of chip soap to 120 gallons of water, use 40 pounds of chips.

Put enough water in the tank to dissolve the soap, turn on the steam, then put in the soap and cook until thoroughly dissolved.

After soap is through boiling, pour in your solution of 20 pounds of Wyandotte Washing Soda and enough warm water to dissolve it. If this does not fill soap tank to required mark, add more warm water. Do not boil soap after the Wyandotte Washing Soda has been added.

If water is hard, use same amount of Wyandotte Washing Soda as soap chips.

FORMULA NO. EIGHTEEN.

To Make Bleach.

Ten pounds chloride of lime dissolved in 20 gallons of water. After all the lumps have been thoroughly dissolved, strain the liquid through a cheese cloth.

Use about one quart to a batch of 100 shirts, or its equivalent in other white work. This bleach should be kept well covered up or put into a carboy and corked.

FORMULA NO. NINETEEN.

Lace Curtains.

Lace curtains should always be carefully looked over before washing, to see if they have any holes or torn places in them, and note made of the number of holes or tears. After this is done and the number properly listed, place the curtains in laundry nets. If you have curtains for more than one customer at the same time you should have a separate net for each party's curtain. Do not try to mark curtains, but put the mark on a piece of muslin and fasten it to the nets, and if you have more than one frame, put each one of those muslin tags on a frame, as you put up the curtains. This will prevent the curtains from getting mixed and save the trouble of tagging each curtain. When you take the curtains out of the frame to press just move the tags right along with the curtains until it reaches the sorting room and is tied up.

FORMULA NO. TWENTY.

For Washing Lace Curtains.

First place them in nets of suitable size and give a lukewarm rinse of 5 minutes; use a little Wyandotte Washing Soda in this rinse. Second, a warm suds, use Wyandotte, 5 minutes. Third, a hot rinse 5 minutes. Fourth, a cold or lukewarm rinse, 5 minutes. It is not necessary to blue curtain in the machine, as this can be done better in the starch. Always be careful in handling lace curtains when they

are wet, as they tear very easily. If you have enough to balance the extractor, it is better to leave in nets till water has been extracted; but if not place them around the sides of the basket of extractor. Always dump curtains out of nets, never pull them out, as this will tear them. If they should be tangled when they come out of nets place them in a large tub or pail, or on a table and take plenty of time to untangle them, but do not pull at them at all, for if you do, you will be sure to tear them and may have them to pay for, and you know what that means. Use soap made according to Formulas No. 1, 2 or 4.

FORMULA NO. TWENTY-ONE.

For Washing Overalls.

If overalls are greasy and badly soiled, wash in the following way: Give a hot suds for 15 minutes; use a little 98 per cent caustic soda in first suds. Use enough to make water good and slippery. Second, a hot suds of 15 minutes; use Wyandotte Washing Soda in second suds instead of caustic. Third, a hot rinse of 10 minutes. Fourth, a hot rinse of 10 minutes. Fifth, a cold rinse of 5 minutes. This will wash any kind of greasy overalls clean. After the overalls have been run in the extractor the proper length of time, I would recommend that they be taken to the starch room, and starched in real thin starch; say that the starch be diluted about one-fourth; or say use a quart of liquid starch to a gallon of hot water. Never iron overalls with a polishing iron, or on any machine that will polish, as this grade of work is intended to remain domestic. Use soap made according to Formula No. 3.

Painters' Overalls.

Treat them the same as the others, only it will be necessary to use a little more caustic soda to remove the paint, and if they are badly soiled, use caustic soda in second suds, and a little Wyandotte in first rinse after the suds. Stove rags and any other greasy rags may be washed in the same manner, as this formula will wash any greasy or badly soiled goods clean.

FORMULA NO. TWENTY-TWO.

Bedding.

First a warm rinse of 5 minutes; use a little Wyandotte in first rinse. Second a warm suds of 30 minutes, and you may use Wyandotte in suds. You may also use a little bleach made according to Formula No. 16 in last 15 minutes of suds. Third, a hot rinse of 10 minutes. Fourth, a hot rinse of 10 minutes. Fifth, a cold rinse of 5 minutes. Sixth, blue in cold water. Use blueing made according to Formula No. 24. Soap according to Formula No. 1, 3 or 4 according to water.

Always be sure to have bedding thoroughly rinsed. Make suds good and hot but never boil. If bedding is washed every day, it is unnecessary to bleach more than once each week, as the Wyandotte Washing Soda will keep bedding in nice condition. Always be careful not to overload your machine for if a machine is overloaded, it is impossible to wash clean and makes it a hard matter to rinse out the soap; and if the soap is not thoroughly rinsed out, bedding will soon turn yellow. If the water has iron in it, and has a tendency to turn the work yellow, it will be necessary to sour the work with oxalic acid about once a week. Use the sour in the fifth rinse, only make it hot and give extra rinse before you blue, making the blueing come in the seventh water instead of the sixth. Good judgment must be used, formulas carefully followed and no guess work done.

FORMULA NO. TWENTY-THREE.

Formula for Family Washing.

As the family washing is fast becoming a very important part of our business, also a very profitable part if we are equipped to handle it ıd we must be equipped to handle all grades of work if we should .e success of the work at all, we will now give it our attention. Say have a mangle, fairly big washers, big dryer, etc., you are in shape andle this work at a profit. If you can get this grade of work at and eight cents per pound you can make a fairly good thing out t. Eight cents per pound all ironed, or five cents rough dry. In ... rough dry you iron the flat work only; starch and dry all the starch work; dry the underwear, etc. For this you charge five cents, or more if you can get it, but have an established price and special prices to none. For eight cents per pound you iron the entire wash. Of course do not take in white shirts, collars or cuffs or shirt waists in the family wash, and if they do send them in the family wash pick them out and make a separate list of them and charge list prices, for they do not come under the head of family wash rates and are not family wash You should always count and mark the family wash the same as you do bundle work, also check it out and see that every piece is in the proper bundle. This can be done just the same as bundle work, and should in fact always be washed just the same as bundle work. Sort it into different washes—table linen and towels in one, bedding in another, starched clothes in another, colored starched goods in another, underwear, socks, etc., in another. You may put the handkerchiefs, cotton or linen in with the white starched clothes. Silks and flannels must receive the same careful treatment as the same grade of work in the bundle wash. In fact the entire family wash must be handled just the same as the bundle work, only that the bedding and table linen—coming under the head of flat work,—may be washed according to formula furnished for this grade of work. Tea towels may be washed in the

flat work provided they are not greasy or badly soiled. In case they are badly soiled they must be washed separate and according to Formula No. 21.

Of course there is quite a little work connected with this branch, but not as much as you may think and the longer you handle the work, the easier it becomes and the better you will like it.

FORMULA NO. TWENTY-FOUR.

Blueing.

Always use condensed or rain water to prepare your blueing, and to every gallon of water use two ounces of blueing. The best blueing for all purposes is prepared as follows:

Formula for preparing Blueing.

¼ oz. regular aniline.
¼ oz. special aniline.
¼ oz. indigotine.
1¼ oz. Navy B.

Place this mixture in one gallon condensed water and boil for 30 minutes with live steam. After the mixture has cooked the required length of time set away and allow to cool. When cool strain through cheese cloth into jug, and to every gallon add one-half pint acetic acid. This will make a strong solution and very little will have to be used. One ounce of the liquid is generally considered enough for a batch of 100 shirts. This blueing will not streak or fade, but will be the same color when dry as when it first comes out of the wheel.

These mixtures of aniline blueing can be procured of.....

.....

.....

This is a reliable supply house and you can always feel sure that you will get the best results from goods purchased of them.

Any other blueing that you may have can be prepared for use in the same manner and used according to directions. I do not recommend any other than aniline blueing, as pure aniline, is the only safe blueing for laundrymen to generally use.

In case the above mixture does not give you the desired shade try 32 special, as this is a very fine quality of blueing and will give you good results. Cook according to Formula No. 24. This blueing

is put up and sold by.....

.....

.....

WATER.

Sufficient tanks should be provided so as to always have an abundant supply of good water. You should also have some good means of heating water without expense. The exhaust steam can be used for this purpose. If water is riley or contains any stains such as iron rust, brick dust, etc., you should have a filter. Of course the first cost of a filter is considerable, but it will be cheap to you if you consider your business worth anything, and your work depending upon the water used to do it, and your customers depending upon your work to please them, you should have good water. But in case you are blessed with good clear well water no matter if it is hard, for you can break it at a small cost by the use of Wyandotte Washing Soda as per rule furnished in this book, you are fortunate. If you break the water in tank you should have two tanks, one for the suds and one for rinses and blueing. The first hot rinses may be from the hot water tank or broken water, but the balance and blueing water should be from the unbroken water tank. If you have not got a condensor to heat your water with, I would recommend that you get a Mason & Ross condensor. Before buying get prices on this particular condensor, as it is cheap both in first cost and in the long run, as it will heat water as hot as you can use it and also condense a certain per cent of your exhaust steam, and will extract all oil from the exhaust. This hot water can also be used to supply boiler, the Wyandotte Washing Soda is a first class boiler compound.

You should always tap tank about three inches from the bottom for a supply for your boilers and for washing, as this condensor and Wyandotte Washing Soda both have a tendency to precipitate the lime and impurities, throwing them to the bottom of the tank. For a filter

I prefer a .....

as I have found it to be a very serviceable filter and will cleanse the water of most any kind of impurities such as mud, brick stains, etc., but of course it will not make hard water soft. If water contains iron, oxalic acid is the only real sour for it, and is also a bleaching agent, and if used according to directions is perfectly harmless to the garments to be washed.

OXALIC ACID.

Oxalic acid is a first class sour and can be used to a good advantage if the water contains alkali or iron. In fact it is a good sour to use in any kind of water, being a wonderful bleaching agent, as well as a sour. Yet it is perfectly harmless if thoroughly rinsed out of goods. The soap must be thoroughly rinsed out before introducing the oxalic acid, as the oxalic acid is not a very good friend to soap, or at least they

cannot agree, and if brought into contact with each other, will both hold their own. The oxalic acid will chase the soap into the seams, neck or wristband and there it will remain, turning those places yellow while the other part of the garment may be as white as snow. Yet the bands and seams are yellow. You would naturally think that the soap would be rinsed out with the rinses used to remove the oxalic, but this is a great mistake for after the soap comes into contact with the oxalic acid it goes through a chemical process and the acids from the fatty substance in the soap will become set and it is a bad proposition to remove it with ordinary washing, but if you are careful to thoroughly rinse out all soap you may never have a yellow seam on your work for the oxalic acid will remove yellow seams coming from any other cause and it is recommended for this as well as a bleach and sour.

To every one hundred shirts use one pint of the crystals. Thoroughly dissolve crystals in hot water and pour the solution in cylinder while it is running toward you as directed in formulas furnished in this booklet. Larger and smaller quantities, same proportion.

STAINS.

The fading of one garment upon another—say pink upon white—can be removed by placing the garment in a solution of bleach made according to Formula No. 16 and acetic acid. One quart of bleach, two gallons of water, one-half pint of acetic acid is the proper solution. Dip garments in and leave until stains disappear, then thoroughly rinse out by giving them several good rinses. If you have quite a few pieces stained, this process may be performed in the washer. This solution will remove most any color. Never put colored goods in this solution, as it will remove all color. This is recommended for white goods only.

INK STAINS.

Common writing ink can generally be removed with oxalic acid by dissolving some of the crystals in hot water and pouring through stained part of garment.

MARKING INK.

Can when fresh be removed with chloroform and carbolic acid of equal parts. Dip the spot where the ink is to be removed into the solution and allow to remain a few minutes, then wash out with soap and Wyandotte Washing Soda Powder and thoroughly rinse, but if the ink becomes dry and set it is a hard proposition.

TEA, COFFEE AND FRUIT STAINS.

These stains can be removed by stretching article over a pail and pouring boiling hot water through stained parts.

ACETIC ACID.

Acetic acid is one of our very useful chemicals—in preparing blueing, also as a sour. To every 50 shirts use 8 fluid ounces. Larger and smaller quantities in same proportion; for bedding, table linen and all flat work, or starch cloths, according to size of load.

IRON RUST.

This can be removed by the use of oxalic acid. Dissolve a few of the crystals in hot water, dip stains and leave for a few minutes, when stains will be removed entirely. Rinse thoroughly to remove the acid.

MILDEW.

To remove this most annoying stain, place articles in sweet milk and place in some warm place and allow to remain there till milk becomes sour or clabor; then add to every gallon of milk one fluid ounce of chloroform. After the chloroform has been in the solution for a couple of hours take out articles and place in sun upon the grass, if you have a convenient grass plot, but if not place on woolen blanket and allow to remain there for a few hours when stains should be removed, but in case it is not entirely gone place them in the solution of bleach and acetic acid as directed in this book.

STARCH COOKING WITH LIVE STEAM.

In cooking starch I would recommend that you use live steam. There are many different makes of starch cookers, steel jacketed, etc., but I do not think there has been anything yet invented that will do the work as live steam will do it, as the live steam has the tendency to burst the grains of starch and make the liquid free from lumps or particles of starch that would bake upon different makes of jacketed kettles. See that your steam pipe is thoroughly clean before using and always blow it out by opening valve to remove all condensation that may accumulate in pipes. Use a copper or brass kettle of suitable size, and cook according to formulas furnished in this book. Write..... .....for catalogue and prices on a complete line of starching specialties.

STARCHING.

Shirts, Collars and Cuffs.

If a dip wheel is used for the collars and cuffs instead of a machine, care must be taken to carefully squeeze out all surplus starch, especially at the end of the collars and cuffs; also at the seams the sur-

plus will collect, and if care is not taken will be left there and when they reach the ironing room, there will be trouble, for the surplus starch will turn brown or gray as soon as it comes in contact with the hot roll. Cheese cloth will be found to be the best to wipe off starch with, but as they must be looked after and kept perfectly clean and rinsed out in hot water as soon as they become saturated with the surplus starch. A hand wringer placed at some convenient place near the starch table will be handy, and will wring the starched cloths better than you can by hand, as you cannot handle them when they come out of the hot water by hand as with the wringer. Bosoms must be treated in the same careful manner as collars and cuffs, and all surplus starch wiped off. When squeezing out starch start at the upper part of the bosom and wipe down and when you reach the end bear the hand a little harder, taking pains to get out all wrinkles, and do not leave them at bottom or sides as this is a poor practice and the work will not be first class unless all wrinkles are removed. A pleat raiser will be found to be a very handy tool to use for removing wrinkles—a real blunt one is the best and will not tear the garment as a thinner one might do; but as the starch we have to use at present is all thin cooking and when used good and hot it is no trouble to get out all surplus wrinkles with ease. Never allow the shirts or collars to lay around after they have been starched and become cold, and never starch faster than they can be wiped off as the starch will become sticky and unfit to handle as soon as it gets cold. Care should also be taken to prevent starch from getting on other parts of the shirt than where it is intended. The yoke should be carefully wiped, also the wristband. If a shirt starcher is used there is not so much chance for starch to get on the unstarched parts as when you dip your work. Of course dipping work was all right until the better equipments came on. A starching machine that will do better work is now upon the market and has been for quite a few years, and every up-to-date laundryman has one or will surely get one as soon as they learn its merits. The best way, and the most rapid way to starch, I have found, is as follows: A crew of four girls is necessary to handle shirts rapidly; one to shake up the shirts and get them in shape to put through the starching machine; another to put them in; another to wipe the wristbands and yoke; and another to wipe the bosoms. A crew of this size under ordinary circumstances can put up in good shape 75 to 100 shirts per hour, and if they are all inclined to be a little swift, can put up 125 without hurrying much. Of course the smaller plants cannot keep a crew of starch girls, but you can arrange your work so as to have this number work on the starching for a couple of hours each day better than you can try to do it with one starch girl, as no one can do this alone and do it as it should be done. If you have a collar machine, the same crew of four can put up a good, big run of collars and cuffs in just a few minutes. For a line of starch-

ing machinery, I would recommend.....

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as it is undobutedly the best and has stood the test under all circumstances, and has always proved a great success.

FORMULA NO. TWENTY-FIVE.

For Cooking Thin Cooking Wheat Starch.

To every gallon of water use 1¼ pound of starch. Place two-thirds of the water to be used to boil. Dissolve starch in remaining one-third of the water. After the starch is thoroughly dissolved, strain through a milk strainer into another clean pail. Now pour slowly into the water and boil 20 minutes. To every gallon of the starch add a lump of Japan wax about the size of a hickory nut, a teaspoonful of borax and one ounce of acetic acid. Always put in the acid after the starch is ready to use. Always strain starch through cheese cloth before using, and keep starch warm while starching.

FORMULA NO. TWENTY-SIX.

To prepare starch for family wash work just the same as you would for shirts in Formula No. 27, only use a little more Japan wax. After the starch has been cooked the required length of time, add to every gallon liquid starch two gallons hot water and strain through a cheese cloth when it will be ready for use. Wring pieces out of starch in extractor and run extractor just long enough to take out surplus starch. Always shake starch work out good before hanging in dry room, and be careful not to let extractor run too long, as it does not take long to take the surplus starch out. Always starch white clothes first. Then strain starch again before starching colored goods —strain through cheese cloth. For black goods you may add a little black ink to the starch.

This starch may also be used for lace curtains. If the lace curtains are cream or tan colored you may color your starch with coffee to suit color of curtains. In placing lace curtains in the extractor care should be taken not to get them cross-ways in the extractor as this will tear them. Place them around the sides of the basket and run until sufficient amount of starch has been taken out. When they are ready to put in the frames pains must be taken to get every scallop evenly stretched, and always be sure that the frames are square and level, as crooked frames will make crooked curtains. After the curtains are dry they may go through the mangle to press them out, or the scallops may be pressed by hand. The mangle, however, is the most successful way to press curtains, but much care must always be taken in using it for curtains. It is necessary that you have one per-

son stand at the pressure lever all the while, and if the curtains should get the least to one side the mangle must be stopped at once, pressure released and the curtain straightened. In this way you can turn out the very highest grade of curtain work and do it with the least effort after you get started. Do not try to hurry this work at first as time is necessary to give satisfaction. If curtains have any holes in them they should be tacked while in the frame and while wet. If treated in this way the mends will not show as if tacked while dry.

FORMULA NO. TWENTY-SEVEN.

For Preparing and Cooking Thin Cooking Wheat and Thin Cooking Corn Starch.

Use in proportion three-quarters corn and one-quarter wheat starch; and one pound of this mixture to every gallon of water. Always use clean, clear water in starch. First weigh your starch and measure water to be used. Place two-thirds of water in starch cooker, turn on steam and bring to a boil. Place starch in a pail with the balance one-third of water and stir till starch is thoroughly dissolved; then strain it through a milk strainer into another pail.

Now pour slowly into starch cooker, and do not pour fast enough to stop it from boiling, but turn on steam a little stronger when you start to pour in the starch. Stir this for a few minutes. Boil for 15 minutes with direct steam. When your starch has cooked 10 minutes, add to every gallon of starch 1 ounce acetic acid, one teaspoonful borax and a lump of Japan wax the size of an acorn; stir this thoroughly into the starch, but do not boil over 15 minutes in all. It is best to put Japan wax into water before starch is added. When starch has been cooked the required length of time, blue it to the required shade, using blueing made according to Formula No. 24.

FORMULA NO. TWENTY-EIGHT.

For Cooking Thin Cooking Wheat and Thick Cooking Corn Starch.

Use in proportion two-thirds wheat and one-third corn. Cook according to Formula No. 27.

STARCH TABLES AND BOARDS.

Should be covered with sheet zinc as this will prevent any stains coming from the board, as the garment being saturated with hot starch it has a tendency to draw rosin or pitch out of boards if unprotected. This zinc can be procured from any tinner at a reasonable cost and you will be greatly benefited by it.

THE IRONING ROOM.

Every machine should be perfectly clean and can be kept so by wiping with clean rags or waste every day before using. Also the

floor should be clean, and all tables, boards, etc., must be kept clean; the board covers should be changed as often as they become soiled; also the covers on all machines must be kept clean.

As soon as they are used a certain length of time, and become sticky from surplus starch which they gather from the inner part of the bosoms, they become harsh and unfit for good work. Some may say that they never have any surplus starch on the board, but this is a sad mistake. While you cannot see the surplus with the eye, the pores in the board cover will in time teach you differently, as they will fill and become stiff from the surplus starch. These covers may be washed several times and are then always clean and in good condition for use until they wear out. The felts on the machines should be removed at least once each week; they can also be steamed and used many times. In this way you can keep your padding nice and soft which is very important as it is impossible to do nice work on hard beds.

Too much pressure is also a bad thing—just enough pressure to make a nice, smooth surface is all that is necessary; if the work is not quite as highly polished as it should be, a little more pressure is necessary. A piece of Japan wax tied in a cloth should always be kept at each machine; also at each ironing board, and before any ironing is to be done the irons must be thoroughly cleaned and waxed. If your machine becomes too hot, wax it with Japan wax, and iron a damp cloth. This will decrease the heat and make a nice surface tension on the roll or iron.

Do not use an iron or machine that is so hot that it will scorch your work, as this is too hot and will have a tendency to make hard, brittle work. An iron just hot enough to dry out the moisture in a reasonable time is much better. Irons too hot will cause bosoms, collars and cuffs to blister; this is also true of an iron not hot enough. You can tell by your work when the roll or iron is at the right temperature.

See that the girls keep their aprons nice and clean as this will prevent any dirt coming in contact with the clean work, and also make a much better appearance to spectators.

IRONING COLLARS AND CUFFS.

On a Combined Machine.

Always have padding on boards nice and soft and not too much pressure. Have roll good and hot, yet not too hot. Iron collars on the right side first, and continue to iron on this side until the moisture has about all been taken out. Then turn collar over and iron inner side until dry, and if they have been ironed too long on the outside they will not curl up as they should, but if they curl up just a little they are working right, but in case you have not ironed the outside

long enough you will notice that they have the print of the muslin on them from the board covers and will be rough on the outside and when you turn them and iron them on the right side they will blister. It is better to always start on the outside and finish on the inner side. In this way the collars or cuffs are put in the position that they are to be worn, and will last longer and are not so apt to break or blister when you run them through the shaper. When collars or cuffs are passed under hot roll a couple of times, by taking them by the ends toward you and raising them it allows the steam to escape and prevents sticking on board covers. But if they are allowed to stick to board covers, the chances are that they will blister. Always wax roll with Japan wax as often as it needs it, and iron a damp cloth after waxing and before ironing any starch work. This damp cloth removes the surplus wax which would come off on your starch work. Ironing turn-down collars in this way, the inner part does not receive enough ironing to put a hard surface on; hence, it will be easier to dampen seams when you go to turn them. If the work is properly dampened it is not necessary for you to use a damp cloth to wipe collars when ironed, and I do not recommend the use of one only to remove any soot or dirt that might drop on work while ironing; and if you dampen a spot to remove a little dirt or soot it is necessary that you dampen the entire piece, as the spot would remain damp when the balance would be ironed enough. A careful painstaking person is the only one to operate an ironing machine and the best is none too good.

IRONING COLLARS.

On A Collar Machine.

They may be handled just the same as on a combined machine, as both machines are on the same principle, only that the collars and cuffs may be handled more rapidly and in some cases better work may be done with a collar machine, but as in the other case some competent person must be put in charge of this machine to get good results and the longer one operates this machine the better they can do the work.

SHIRT IRONING.

As there are so many makes of ironing machines for ironing shirts, the best to select would be a hard matter. Some prefer one make and some another. Generally the one that you prefer is the one that you are most familiar with, but there is a difference in the makes of ironing machines. Of course all of them will do good work with a skilled operator, but some will do better work than others and with much more ease to the operator. While I have operated every make of an ironing machine now upon the market, I am like the rest of you, I have my preference, but most any good high-board shirt ma-

chine will do good work, and work can be handled better on a high-board machine than on a low board or standard, as the shirts can be put on and taken off much quicker, and most all high-board machine boards are provided with a neckband and yoke clamp which enables the operator to shape the shirt to a better advantage. Of course those clamps may not be used by experienced operators more than once a day, but they are there when you do need them and are not in the way when not in use. To commence to iron a shirt always have them folded so when you pick up one it is in the proper position to go on board.

Iron wristbands first if you iron them on a shirt machine. Iron them on the outside first as you would a collar or cuff, and when they are through they will be curled in proper shade. Commence now on the bosom. If an open front iron upper half first; go entire length of bosom without reversing machine. In ironing the upper half you can get closer to the end and not muss the half you have ironed first, to iron the other half. Having finished both halves there will be a little spot at the bottom of the bosom which to get at you will have to remove shirt from board and turn it around. Now this little spot remaining damp enables you to match button holes nicely. Place button holes squarely over each other, and hold them between thumb and finger until you have ironed little spot at bottom of bosom, when the entire bosom will be smooth and will not bulge when buttoned. Closed fronts—commence at top and run entire length of bosom. Continue to do this until bosom is finished. Raise bosom up occasionally while it is going under roll, which will allow the moisture of escape and make a nice surface on inner side of bosom, and will have a tendency to make bosom more flexible.

NECK AND WAISTBAND IRONING.

I presume that every laundry is equipped with a neck and wristband ironer, as no laundry is complete without one. If you have one, and have not got a yoke ironer, the band ironer providing the roll or shoe is long enough, say six inches, may be used to iron the yokes. If you use the band ironer for the yoke work, the best results may be obtained by first ironing the yoke on the inner side. In this way the shirt will have a much nicer appearance when folded, and will be more comfortable for the wearer. The neck band should also be ironed on the inner side first. Much care should be taken to get the neck band ironed so that it is as near upright as possible when shirt is folded, for there is nothing so annoying to the wearer than a poorly set neckband, as the collar will not set well, and the collar work is condemned instead of the poorly set band. An expansion band ring used in finishing has a tendency to overcome this evil and make the band set in the proper shape. Too much pains cannot be taken on the neckband ironer. If you have a yoke ironer all the yoking may be done on this

machine, and in this case the yoke must be ironed the same as on the band ironer, as the yoke has much to do with the looks of the shirt, as it is always in plain view of the wearer when package is open. The yoke will be noticed as soon or sooner than the bosom and when put on and is rough and annoys the wearer by rubbing his neck, particular notice will be taken by him, not to give you another chance to pretend to do his work. This may all be avoided by giving the little things your particular attention.

THE BODY IRONER.

On this machine nice work may be done. Also rapid work, which counts. The sleeves may also be ironed on this machine, and all cotton underwear, duck skirts, duck trousers and many other things, and in case you have no mangle, napkins, towels, pillow cases, etc., may be ironed on this machine. Handkerchiefs, socks, overalls, and in fact any plain work, either starched or flat can be done up rapidly and in first class shape on this machine. But as in all cases an experienced operator must be in charge, and in that case any machine will do good work.

TURNING AND EDGING COLLARS.

This being one of our many important parts of the work we will now give it our closest attention, as there is nothing more annoying than a rough edged collar to the wearer. We should take particular pains to see that no collars or cuffs leave the laundry with a rough edge, no matter if the collars are worn when received, we must send it out with the edge as smooth as glass. This you can do by using the

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as this device will edge standing collars and turn roll collars and tip wing points to perfection.

To Turn A Roll Collar

pass the seam over the tipping device, turning on steam a little stronger than for wing points; after the seams become soft, place collar around the heated iron, draw it tightly to the heated iron by placing thumbs into the roll part of collar a half inch or so at each end, thus giving the collar a nice roll front which is so desirable, and we must please our patronage.

To Tip Wing Points.

place the seam which marks turning place over the tipping device, and slowly bend it over until it is in the proper condition. You may now lay the collars on the tables for just a minute or so, when they will again become stiff,—as the starch which I recommend is elastic,—and

the steam does not have a tendency to take out the starch, but just removes the stiffness while they are in the steam, leaving them nice and stiff yet flexible. Turn-down collars may also be dampened in the same manner and get good results, but as this process is a little slow for common turn-down collars, I would recommend that you dampen

them with a..... .....

as this device will dampen turn down collars rapidly and evenly, and prevent them from breaking when put through the shaper; but if you have not got a shaper, the next best way to turn the turn-down collars is to use a common smoothing iron. If you use the latter, have it properly wiped and good and hot; take collar at button hole between thumb and finger of left hand; take iron in right hand—heel of iron. Now push iron slowly over collar, raising the iron a little at the point and bearing down good and hard at the heel, at the same time raising collar with left hand keeping it closely against heel of iron until you reach the center of the collar. Now turn iron around and turn other half the same as first. In this way the collar will be in proper shape. Turn-down collars, as standing collars, are affected with rough edg

but you can overcome this by using a.....

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IRONING FLANNELS.

Flannels should not be ironed; the facing may be pressed out, but the other part of the woolen garment should be brushed with a stiff brush to raise the napp, then fold them in the proper manner. This will put flannels in a nice soft and fluffy condition as they should be. Some laundrymen recommend that the woolens be pressed under a damp cloth with a hot iron, but I contend that this will spoil flannel or woolens and make them harsh and shrunken, as the damp cloth contains enough moisture to steam the woolens through. This also changes the temperature from cold to hot, and when the cloth has been removed the flannels suffer another violent change from hot to cold, and more woolens have been ruined in this way than by the poorest kind of washing, as those changes are the very worst kind—being so sudden.

THE STEAM MANGLE.

The size of this all important machine is the first thing to consider; the larger the better, no matter if you only have a small amount of work. It is as important that you do it in first class shape and at as small a cost as if you were doing a ton per day. Of course I would not recommend one of those very largest mangles for the smaller

plants, but on the other hand would not recommend anything smaller than a 100-inch mange for any plant, as table linen and sheets would have to be doubled to be put through the mangle; and it takes twice as much time to dry out the work double as if put through single, and the work does not look as smooth and nice and in fact will not last as long as when put through single, as the seams in the middle will wear through sooner than the rest of the work and your customers will notice this in a short time, and will take this into close consideration and look up a laundry to send flat work to where a larger mangle is used. Small mangles are all right for a towel supply company, where small pieces are to be ironed, but will not properly and perfectly do the larger pieces.

Mangle blankets should be taken off and washed every week to keep them nice and soft for when mangle blankets become hard and packed down the pores become closed and the moisture from the work has less chance to escape. If the mangle is in constant use the blankets should be changed twice each week, and the muslin covers as often as they become soiled. The hot drum may be kept nice and bright by using Japan wax. Wax it every day or so. This will also prevent the work from sticking to the hot drum; it also keeps lent and feathers which come from the bedding from sticking to the drum or rolls. To do mangle work small girls can do the work as well as larger ones, and you can secure them a little cheaper. The most satisfactory way I have found to charge for flat work is by the pound. When you do this work by the piece they will sometimes hold out all the small pieces and send the large ones to the laundry. By the pound this cuts no figure. You get your price per pound for small as well as large pieces Three cents per pound is a fair price, but not too much. You can make a good profit at this figure, and it will also be a reasonable price to the customer. Some get 3½ and 4 cents and you should try and get all you can for your work, but do not try to do this work for less than 3 cents per pound, as this is cheap enough for first class mangle work, which you will do when you follow my formulas.

DAMPENING.

While there are so many different ways to do this work, I will not try to say what the best way is, but where a dampening machine is used, the same one should use it every time as this will put you in a position to know just who to go to if the work is not properly done. Good dampening is as important as any other part of the work, and poor dampening means poor ironing; but in case you use cloths to dampen, the same ones should also wring those cloths each time. A good way to test the cloths to know when they are dry enough is to take one corner of the cloth and twist it just as tight as you can between thumb and finger, and if any water drops the cloth is too wet, but if the water

just comes to the surface so you can see it, but none drops, the cloths are in good shape for dampening. Just how long to leave clothes in the dampening cloths is a question. Climate makes a difference. The condition of the weather also cuts some figure, and the safest way will be to look after your work closely, and as soon as it becomes damp enough, it should be taken out of press, and ironed as you take out of the cloths. If you find that the work is getting too damp, then take it all out of the cloths, and wrap it up in bunches in a damp cloth to keep it just right. If you see that it is drying out after it has been placed in bunches and before you can get it ironed, add on another damp cloth and in this way you will have no trouble with your dampening.

MARKING IN.

After opening the bundle sort the contents into the different classes. Place each class in separate place. Now begin and count and list. After this is done throw all articles that are marked into their place for the wash, and those unmarked may now be marked, and in this way you are less apt to make mistakes, as if you tried to look up the mark and count at the same time.

On the other hand when you start to mark you are not disturbed or annoyed by looking over your work, to find a mark, but when you pick up a parcel you know that it is not marked and that you have the mark and nothing else upon your mind until you are through with that bundle; then another one, a different mark, but handle it in the same manner. You must have a system of every branch of the work if you would make a success of the business.

THE ASSORTING.

About the only practical way that I have found to do this part of the work is to use upright assorting racks, better known as "pigeon holes." These racks may be made large enough to place two bundles in one pigeon hole. In this way it will not be necessary to have so many holes as if you had a separate one for each bundle; and another point that is gained is, less mistakes are apt to occur, for the simple reason that the one engaged in taking the parcels out will always look each one carefully over to see that it is in the proper bundle, but when only one bundle is in one pigeon hole alone, the worker will only count the pieces, not looking at the work, naturally supposing the assorter has been accurate in his work. In this way the goods are single-checked, and the other they are checked out doubly. There are assorters who are very accurate, but none perfect. The only one who makes no mistakes is he who never does anything. A large table is necessary to set in front of the racks to lay the work upon to be

bundled. The wrapping paper racks may be placed upon this table, making it handy to do the bundling. A space of 3½ feet between table and rack is enough, and saves walking for the assorter. This table may also be used to lay work upon before it is assorted into the racks. There may also be a rack placed under this table to lay the bundles upon after they are tied up. This will be handy and save room, as the space under the table is useless for any other purpose. When work is taken from rack and placed upon table, the list must accompany the work, and in this way there is no chance for the bundle to get the wrong list. Packages should not be layed too clase together before wrapping as they may get mixed here before being tied up. The table should be as long as the assorting rack. This makes plenty of room to lay the work upon as the work is taken from the rack, and is handy. The racks and tables must be kept clean and free from dust and all engaged in handling the work must have clean hands, as finger marks are not good trade marks for your work.

GENERAL RULES THAT MUST BE OBSERVED TO SUCCESSFULLY OPERATE A STEAM LAUNDRY.

1. See that everything is perfectly clean; that all tables are carefully wiped off every morning with a damp cloth, before laying the clean parcels upon them.

2. The floor and all wood work, dray room, tables, etc., should be thoroughly scrubbed at least once a week.

3. See that all machines, pulleys, belts and shafts are wiped off at least once a week to prevent oil and dirt collecting upon them and falling down upon your work.

4. Keep all belts at the proper tightness to prevent slipping and making dirt fall from them.

5. See that all your old papers are burned up each day and not allowed to accumulate in marking room, as they are a good fire trap.

6. Keep your engine and boiler room as clean as possible, as this department being dirty there will be more or less dirt tracked into other departments, consequently, making all departments unfit for clean work.

7. After you are through with starching machine, pails, cups, etc., used in starching, put them to soak as soon as the last piece is starched and wash them perfectly clean, dry them and put them in a proper place for the next day's starching.

8. See that the girls that handle clean work have their aprons washed regularly and that they keep their hands clean, as this is very important. Some girls make a kick about this rule, but if they do, they are not the proper kind of girls to employ where high grade work is to be turned out.

9. See that belts on washing machine are of the same tightness so that inside cylinder makes the same number of revolutions both ways.

10. Clean your washers regularly with muriatic acid. This will preserve the wood and make it hard and sleek and free from lime and dirt.

11. Do not overload your washers as they are built with a capacity of so much and after they are loaded to their capacity, all extra work is an overload and will spoil the entire batch.

12. Make sure that you run your loads the required length of time. Do not cut short any of your changes, as just one change cut short may cut the plant short of customers.

13. Always see that your machine has plenty of suds and that it does not go down during a suds, but do not extreme and put in so much soap that it runs over, as this is soap thrown into the sewer.

14. A good washman at a good salary is cheaper than a poor one, if the latter works for nothing, for washing is the staff of the laundry business.

15. Get a soap that suits your water and stick to this soap and do not be misled by some fake advertisement.

16. Always buy your supplies from a good, reliable firm, also your machinery.

17. Specialize your help; have certain ones to do certain things, for the oftener one does the same thing, the better they can do it.

18. Try and get cash for your work and make a profit by discounting your bills.

19. Do not try to run your competitor out of business by cutting prices and paying high commissions; you will find that the rule works to the reverse and you will be the loser in the end.

20. In opening an account with a new firm, to avoid delay in shipment of your goods, you should first fill out a statement showing your financial standing, and they can fill your orders without looking it up, thereby saving time. Patronize firms mentioned in this book.

RULES FOR FIREMEN AND ENGINEERS ON THE CARE AND MANAGEMENT OF STEAM BOILERS.

Height of Water.—Inspect carefully the amount of water in boiler. Don't rely upon the water gauge, as it becomes stopped up; but try gauge cocks and see that there is at least 2½ inches of water over flues or crown sheets. Don't unbank fire or renew fuel until you are satisfied with the amount of water in boiler.

2. When water is found below the gauge cocks, DON'T turn on the feed, and don't tamper with or open the safety valve. Let the Feed, Safety Valve and steam outlets remain as they are. Cover the

fire over with ashes or fresh (slack, if handy), or in case of firing with wood withdraw the fire and swing open the fire doors.

3. In case of foaming close throttle and keep closed long enough to show the true level of water. If that level is sufficiently high, feeding and blowing will usually suffice to correct the evil. In case of violent foaming, caused by dirty water, or change from salt to fresh, or visa versa, in addition to action above stated, check draft and cover fire with fresh coals.

4. Safety Valve.—Never put any additional weights on safety valve lever. See that it corresponds in blowing off with pressure indicated by steam gauge. Inspect frequently by raising the lever cautiously, as the valves may become stuck to seats and useless for the purpose intended.

5. Feeding.—Never feed the boiler with cold water, but use some good form of heater. Not only is considerable fuel saved by this but repairs to the boiler also.

NEVER feed in the front end of the boiler (unless the pipe is carried well through to the rear end). If fed through the front end, lime and other impurities are precipitated on the sheets over the fire, making them liable to bulge, sag, leak and crack.

6. Leaks and Blisters.—As soon as found, they should be properly repaired.

7. Blowing Off.—Blow off at least once in two weeks, every Saturday night would be better. In case the feed water is muddy, blown down a few inches every day. Boilers should never be blown out while hot, as the walls, plates, flues and braces retain sufficient heat to bake the deposits of mud into a hard scale that becomes firmly attached to their surface, and with the outer walls and bridgewall hot there is danger of injury to the plates in the boiler. The boiler and walls should always be allowed to cool down before water is run out; the deposit of mud and scales will then be quite soft, and can easily be washed out from all accessible places. Many engineers suppose that blowing out a boiler under pressure has a tendency to remove these deposits from the boiler, but experience has shown this to be a very grave mistake.

8. Removing Deposit and Sediment.—In tubular boilers the manhole should be often opened, and all collections removed from over the fire. For extracting lime and other impurities, secure a boiler compound made especially for the water you are using. There are firms in this business, by sending them some of the scales taken from your boiler they will prepare a compound to destroy the lime, etc., without harm to the boiler.

Compound.—Wyandotte Washing Soda is an excellent boiler compound. It removes the scale and keeps the boiler perfectly clean, without the slightest "pitting." In places where the water is soft, one

pound to each hundred gallons of water in your boiler should be used. Where the water is hard, double this amount.

CARE OF STEAM ENGINES.

Always have engine set level upon a good solid foundation and parallel with line shaft, in some good convenient place where plenty of light may be had. Keep engine well oiled but do not put so much on as to run over oil cups and holes, as this is dirty and careless as well as waste of oil. A drop in the proper place is better than a gallon spilled all over the floor and engine. See that all bolts are tight; pack piston rod, valve rods and governor stem regularly and do not allow packing to become hard and dry.

Garlock packing, as my experience has taught me, is the best on the market. Try it. After packing becomes hard and dry it will cut rods and make them impossible to keep tight. If your rods are cut take them out, have them turned true and keep them so by packing regularly. See that Lubricator feeds regularly and just enough to properly supply Valve Chamber and inside of Cylinder. Keep Pins set up just so engine runs smoothly and does not heat or knock. If any bearing about engine heats, oil it, and if this does not remedy it, something is wrong. It is either too tight or out of line. Always keep engine clean by wiping it each morning and noon before starting it. See that valve is properly set, by examining it. Once properly set is good for all time to come if it is not moved or eccentric does not slip. A thickness of a knife blade is plenty of lead for the average engine. If you are not a practical engineer you had better get one to set valves and adjust your engine, and if you can, it will pay you to keep a practical man, as good men are cheap at any price.

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